

Remarks and Arguments

Applicants have carefully considered the Office Action dated October 31, 2005 and the references cited therein. Applicants respectfully request reexamination and reconsideration of the application.

Claims 86 – 95 are currently pending.

Claims 96 – 106 have been withdrawn.

Claims 93 – 95 have been indicated as allowable.

Claims 107 – 109 are canceled by this amendment.

Claim 110 is newly added by this amendment.

Applicants' attorney confirms the provisional election to prosecute the invention of claim 93.

Claim 91 has been amended and is believed to conform with 35 USC 112, second paragraph. These amendments have been made to clarify the language of the claim, not to distinguish over any other reference of record whether considered singularly or in combination.

Claims 86, 90 and 91 stand rejected under 35 USC 102(b) as being anticipated by Pompei (EP 0 973 152 A2). Claim 86 has been amended to now recite a method for steering a directional audio beam comprising "adjusting both amplitude and phase of said audio signal and said carrier signal to steer said audio beam to a desired direction, wherein the amplitude and phase of said audio signal is adjusted independently from the amplitude and phase of said carrier signal" (claim 86, lines 6-9). In claim 86, as amended, the amplitude and phase of the audio signal are *adjusted independently* from the amplitude and phase of said carrier signal. As shown in Figure 6 of the subject application, the amplitude and phase of the audio signal is adjustable independently from the amplitude and phase of the carrier signal by means of, for example, respective adjustable gain and delay modules 61 and 62 before being supplied to the modulator.

In contrast, Pompei discloses a phased array technique that applies a relative phase shift *across all frequencies of the modulated carrier signal* to facilitate focusing, steering or shaping the ultrasonic beams generated by a transducer array 10. Pompei does not achieve the desired steering because the audio signal that is self-demodulated from non-linear interaction of ultrasound is not guaranteed to have the same delay or

phase as the carrier signal. In light of the foregoing, claim 86, as amended, is believed to patentably distinguish over the Pompei reference. Claims 87 – 92 and 110 include all the limitations of claim 86 and are likewise believed not anticipated by Pompei for at least the same reasons as claim 86, as well as for the merits of their own respective limitations.

In addition, Applicants respectfully traverse the rejection of claim 90 as anticipated by Pompei, as modified by US Patent 5,081,995, Lu et al., hereafter Lu. To anticipate a claim, a reference must teach every element of the claim (MPEP Section 2131). Here, the Examiner appears to be combining the teachings of both the Pompei and Lu references as a basis for the rejection. Such a combination can only be used in conjunction with a rejection under 35 USC 103, not under 35 USC 102(b). As such, Applicants respectfully assert that the rejection is improper. Even if the Examiner set forth a rejection of claim 90 as being unpatentable over Pompei in view of Lu, such rejection would still fail since Lu does not supply the teachings missing from Pompei, as explained previously with reference to the rejection of claim 86.

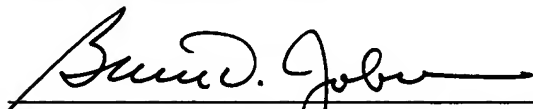
Claim 87 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of US Patent US 5,911,692, Hussain et al. Claim 88 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of US Patent 5,081,995, Lu et al. Although not set forth formally, claim 89 appears to be rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of US Patent 5,081,995, Lu et al. Claim 92 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei (EP 0 97 152 A2) in view of US Patent Application 2003/0223554, Zhang. Applicants respectfully traverse the above rejections under 35 U.S.C. §103(a) on the grounds that the Examiner has failed to create a *prima facie* case of obviousness. In accordance with MPEP §2143.03, to establish a *prima facie* case of obviousness 1) the prior art reference (or references when combined) must teach or suggest *all* of the claim limitations; 2) there must be some suggestion or motivation to modify a reference or combine references; and 3) there must be a reasonable expectation of success. For the reasons set forth previously with respect to the amendments to claim 86, Applicants respectfully assert that Pompei does not teach, disclose, or suggest a method for steering a directional audio beam including the steps

of adjusting the amplitude and phase of *both the audio and carrier signals* to steer the audio beam to a desired direction, wherein the amplitude and phase of said audio signal are *adjusted independently* from the amplitude and phase of said carrier signal. Nor do any of the Hussain, Lu, or Zhang references supply such teachings missing from Pompei. Accordingly, Applicants respectfully assert that claims 87-89 and 92 are patentable over any of Pompei, Hussain, Lu, or Zhang, whether considered singularly or in combination with each other or any other art of record.

Claims 107 – 109 have been canceled, without prejudice. Accordingly, any rejections of those claims are hereby deemed moot.

Any amendments to the claims as set forth herein, including the addition, cancellation, or withdrawal of any claims, have been offered to advance this application to issue. None of the amendments made herein should be construed as an admission that the subject matter of the claims, as originally filed, is anticipated by or made obvious in light of any art of record whether considered singularly or in combinations. Applicant expressly reserves the right to pursue the originally filed claims in another co-pending application without being prejudiced by any amendments, including cancellation of claims, made herein.

Respectfully submitted,



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